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| 10/534,984 | 01/19/2006 | Keigo Higaki | 270933US0PCT | 1862 |
| 22850 | 7590 | 02/27/2009 | | |
| OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | EXAMINER KRYLOVA, IRINA | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| | | | |
|------------------------------|-----------------|---------------|--|
| <i>Office Action Summary</i> | Application No. | Applicant(s) | |
| | 10/534,984 | HIGAKI ET AL. | |
| | Examiner | Art Unit | |
| | Irina Krylova | 1796 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2009.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2 and 7-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2, 7-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Cancellation of claims 1, 3-6 is acknowledged. Addition of a new claim 11 is acknowledged.
2. All outstanding objections and rejections are withdrawn in light of Applicant's amendment filed on 02/12/2009.
3. The new grounds of rejection set forth below are necessitated by Applicant's amendment filed on 02/12/2009. Thus, the claim 2 was amended to specify the percent ratio between the components in the composition. The limitation to claim 2 was not previously presented. Therefore, the following action is properly made final.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 2, 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyajima et al in US 5,635,565.

Miyajima et al discloses a thermoplastic resin composition comprising (col. 7, lines 32-35):

A) 5-99% of a modified acrylic rubber obtained by polymerizing:

- a) 50-85%wt of an acrylic rubber (col. 2, lines 45-67);
- b) 5-48%wt of an aromatic vinyl compound;
- c) 2-45%wt of a vinyl cyanide (col. 2, lines 32-40)

B) 1-95%wt of additional thermoplastic resin used alone or in combination of two or more comprising:

1) rubber-modified thermoplastic resin obtained by polymerizing a monomer mixture comprising an aromatic vinyl compound and a vinyl cyanide in the presence of a rubbery polymer, wherein the rubbery polymer comprises a diene rubber (col. 6, lines 35-47; col. 2, lines 44-50);

2) copolymers obtained by polymerizing a monomer mixture comprising an aromatic vinyl compound and a vinyl cyanide, wherein the proportion of the vinyl cyanide is 1 to 50% by weight (col. 6, lines 54-67; col. 7, lines 1-5).

5. The specific Examples provided in Table 2 show compositions comprising a mixture of modified rubber with two styrene/acrylonitrile copolymers: one having 25% acrylonitrile, the other copolymer comprising 30% acrylonitrile (col. 11, lines 18-26, Example 7 in Table). In addition, the Examples provide different combinations of

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modified rubbery polymer with styrene/acrylonitrile copolymer(s) to obtain compositions having different flexural modulus value.

6. As to instant claims 7-10, the composition may be molded into various molded articles by injection molding, sheet extrusion molding, blow molding (col. 8, lines 4-8).

7. As to instant claim 11, since the content of vinyl cyanide in the components of the composition falls within the ranges of the content of vinyl cyanide claimed in the instant invention, therefore, it would have been obvious that the content of the bonded vinyl cyanide in the acetone-soluble fraction of the composition of Miyajima et al will fall within the same range for bonded vinyl cyanide in the acetone-soluble fraction claimed in the instant invention.

8. Since Miyajima et al teaches the use of a combination of both modified acrylic rubber and modified diene rubber, and styrene/acrylonitrile copolymers comprising different content of vinyl cyanide monomer (25% and 30% as in Example 7) to produce compositions comprising different flexural modulus values, and the ranges of the components in the composition of Miyajima et al are within the same ranges claimed in the instant invention, therefore, it would have been obvious to one skilled in the art at the time of the invention was made to try to make variations within the ranges given by Miyajima et al to obtain predictable results (flexural modulus).

9. Claims 2, 7, 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,229,457 by Kamoshita et al.

Kamoshita et al. discloses a resin composition comprising:

- 1) 5 to 100% by weight of component (A) comprising a graft copolymer obtained by polymerizing 30-90 parts by weight of a monomer mixture consisting essentially of 45-75% wt. of vinyl cyanide and 25-55% by wt. of aromatic vinyl compound in the presence of from 10-70 parts wt of an acrylic rubber;
- 2) from 0-80% by weight of component (B) comprising a graft copolymer obtained by polymerizing 30-90 parts by weight of a monomer mixture consisting essentially of 45-75% wt. of vinyl cyanide and from 25-55% wt of aromatic vinyl compound, in the presence of a 10-70 parts wt of a diene rubber;
- 3) from 0-85% by weight of component (c) comprising a copolymer obtained by polymerizing a monomer mixture consisting essentially of 45-75% of vinyl cyanide and 25-55% of an aromatic vinyl compound (Col. 2, lines 60-65; col. 3, lines 1-17).

The total rubber content in the resin composition comprises 10-20% wt (col. 11, lines 7-8).

10. Though Kamoshita et al specifies the content of vinyl cyanide being 45-75%wt, the provided Example C-4 in Table 2 shows the content of vinyl cyanide in the copolymer being 29%wt (col. 21, lines 30-35). In Table 3, the Comparative Examples 1 and 6 provide the content of vinyl cyanide in the vinyl cyanide/aromatic vinyl compound copolymer being 25%wt (Table 3). Also, Table 3 provides examples of different

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combinations of acrylic rubber, diene rubber, vinyl cyanide/aromatic vinyl compound copolymer to produce compositions having different flexural modulus value.

11. Thus,

since 1) the ranges of the used components in Kamoshita et al. composition are substantially identical to the ranges provided in claims of the instant invention;

2) the content of rubber in the resin composition is within the overlapping ranges, therefore,

it would have obvious to one skilled in the art at the time of the invention was made, to try to make variations within the ranges given by Kamoshita et al to obtain predictable results (flexural modulus and coefficient of linear expansion).

12. Instant claim 7 is an intended use claim.

As to the claimed intended use, MPEP 2111.02 states:

During examination, statements in the preamble reciting the purpose or intended use of the claimed invention must be evaluated to determine whether the recited purpose or intended use results in a structural difference (or, in the case of process claims, manipulative difference) between the claimed invention and the prior art. If so, the recitation serves to limit the claim. [MPEP 2111.02 (Citing *In re Otto*, 312 F.2d 937, 938, 136 USPQ 458, 459 (CCPA 1963)]

No structural difference can be discerned between the prior art and the instant invention.

13. As to instant claims 9-10, the composition can be molded to produce manufacturing articles, included flat sheets or shaped articles (col. 12, lines 5-10).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

14. Claim 2 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2 of U.S. Patent No. 5,229,457. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reasons.

US patent 5,229,457 discloses a thermoplastic resin composition comprising 1) an acrylic rubber modified with vinyl cyanide and aromatic vinyl compound; 2) a diene rubber modified with vinyl cyanide and aromatic vinyl compound; and 3) a copolymer of 45-75% of vinyl cyanide and 25-55% of an aromatic vinyl compound. The ranges of the

components in US'457 substantially overlap with the ranges claimed in the instant application.

US patent '457 does not claim the composition comprising a copolymer of a vinyl cyanide and an aromatic vinyl compound, wherein the content of the vinyl cyanide is less than 30%. However, the Example C-4 in Table 2 of the US '457 shows the content of vinyl cyanide in the copolymer being 29%wt (col. 21, lines 30-35). In Table 3 of US'457, the Comparative Examples 1 and 6 provide the content of vinyl cyanide in the vinyl cyanide/aromatic vinyl compound copolymer being 25%wt (Table 3). Also, Table 3 of US'457 provides examples of different combinations of acrylic rubber, diene rubber, vinyl cyanide/aromatic vinyl compound copolymer to produce compositions having different flexural modulus values. Case law holds that those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent. In re Vogel, 422 F.2d 438, 164 USPQ 619,622 (CCPA 1970).

Therefore, it would have obvious to one skilled in the art at the time of the invention was made, to try to make variations within the ranges given in US'457 to obtain predictable results (in the present case, flexural modulus and coefficient of linear expansion).

15. Claim 2 is directed to an invention not patentably distinct from claims 1-2 of commonly assigned US patent 5,229,457.

Specifically, see the discussion in paragraph 14 above.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300). Commonly assigned US 5,229,457, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

16. Claim 2 is rejected under 35 U.S.C. 103(a) as being obvious over US 5,229,457.

Specifically, see the discussion set forth in paragraph 14 above.

The applied reference has a common assignee and a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Response to Arguments

17. Applicant's arguments with respect to amended claims 2, 11 have been considered. With respect to arguments regarding rejection over Nanasawa et al and Brandsetter et al, these arguments are moot in view of the provided amendments. The arguments regarding the rejection over Kamoshita et al were fully considered but they are not persuasive. See the rejection above. The amended claim 2 and newly added claim 11 are unpatentable over Miyajima et al. See the rejection above.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this office Action. Accordingly, THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina Krylova whose telephone number is (571)270-7349. The examiner can normally be reached on Monday-Friday 7:30am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasudevan Jagannathan can be reached on (571)272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/I. K./
Examiner, Art Unit 1796

/Vasu Jagannathan/
Supervisory Patent Examiner, Art Unit 1796